

# Russell's theory of descriptions

September 23, 2004

1	Propositions and propositional functions . . . . .	1
2	Descriptions and names . . . . .	3
	2.1 Indefinite descriptions do not stand for particular objects in the same way names do . . . . .	3
	2.2 Three puzzles caused by the assimilation of definite descriptions to names . . . . .	4
	2.2.1 The problem of negative existentials . . . . .	4
	2.2.2 Substitution failures . . . . .	5
	2.2.3 The law of the excluded middle . . . . .	5
	2.3 The distinction between primary and secondary occurrence . . . . .	5
3	Russell's theory of descriptions . . . . .	6
	3.1 Indefinite descriptions . . . . .	6
	3.2 Definite descriptions . . . . .	6
	3.3 'Everyone', 'someone' . . . . .	7
	3.4 Strengths of Russell's theory . . . . .	7
4	Objections to Russell's theory . . . . .	7
	4.1 Incomplete definite descriptions . . . . .	7
	4.2 Other uses of 'the': generics . . . . .	7
	4.3 The view that sentences containing descriptions say something about propositional functions . . . . .	8
5	Russell's view of names . . . . .	8
6	The metaphysical importance of Russell's theory . . . . .	8

## 1 Propositions and propositional functions

Russell (unlike contemporary theorists) means by 'proposition', as he puts it, "primarily a form of words which expresses what is either true or false." Roughly, then, 'propositions' in Russell refers to 'declarative sentences.'

Propositional functions are something else:

"A 'propositional function,' in fact, is an expression containing one or more undetermined constituents, such that, when values are assigned to

these constituents, the expression becomes a proposition. . . . Examples of propositional functions are easy to give: “ $x$  is human” is a propositional function; so long as  $x$  remains undetermined, it is neither true nor false, but when a value is assigned to  $x$  it becomes a true or false proposition.” (*An Introduction to Mathematical Philosophy*, pp. 155-156)

What does it mean for ‘ $x$ ’ to ‘remain undetermined’, or to have a ‘value’? To understand what Russell is talking about we will need to explain some of the background of this passage in the theory of reference.

To a first approximation, the basic idea of the theory of reference is that we can assign *values*, or *references*, to expressions which will explain the conditions under which sentences involving those expressions are true. You can think of reference as ‘power to affect truth value.’

What kind of value we assign to an expression will depend on what kind of expression it is. Focus for now on simple sentences of the form ‘ $n$  is  $F$ ’, where ‘ $n$ ’ is a name, like ‘Bob,’ and ‘is  $F$ ’ is a predicate, like ‘is male’. Intuitively, a sentence of this form is true just in case the object picked out by the name is a member of the class of things which ‘are  $F$ ’. In the case of this example, the sentence is true just in case Bob, who is picked out by the name ‘Bob’, is a member of the class of males — the class of things which satisfy the predicate ‘is male.’

This suggests a natural idea for the references of names and predicates. We should let the reference of a name (if it has one) be an object (as the reference of ‘Bob’ is Bob), and the reference of a predicate be a class of things (as the reference of ‘is male’ will be the class of things which are male). We will then have an explanation of what it takes for a simple sentence to be true: the sentence will be true if and only if the reference of the name is a member of the class which is the reference of the predicate.

Now return to Russell’s definition of a propositional function. To say that a propositional function is an expression containing one or more *undetermined constituents* is to say that it is an expression containing one or more expressions which *have not been assigned a reference*. This is the case with Russell’s example:

$x$  is human.

Here, ‘ $x$ ’ has no reference; we might as well have written

\_\_\_ is human.

Once those undetermined constituents are ‘filled in’ by assigning them a reference (or by replacing them with words which have a reference), we will have a proposition: a form of words which expresses something which can be either true or false.

## 2 Descriptions and names

A first natural thought is that what goes for names like ‘Bob’ should also go for descriptions — both indefinite descriptions, like ‘a man’, and definite descriptions, like ‘the tallest man in this room.’ After all, they seem to play the same grammatical role as proper names; just as we can say

Bob is happy.

we can say

A man is happy.

The tallest man in this room is happy.

On this view, we should let the references of such expressions be the objects which those expressions pick out.

Russell, however, argues that this does not capture the real nature of either indefinite or definite descriptions.

### 2.1 *Indefinite descriptions do not stand for particular objects in the same way names do*

The first problem Russell notes is that there is a clear sense in which neither indefinite nor definite descriptions do not stand for objects at all:

‘Our question is: What do I really assert when I assert “I met a man”? Let us assume, for the moment, that my assertion is true, and that in fact I met Jones. It is clear that what I assert is *not* “I met Jones.” I may say “I met a man, but it was not Jones”; in that case, though I lie, I do not contradict myself, as I should do if when I say I met a man I really mean that I met Jones. . . . not only Jones, but no actual man, enters into my statement.’ (167-8)

Russell expresses the same point later in the article:

“... when we have enumerated all the men in the world, there is nothing left of which we can say, ‘This is a man, and not only so, but it is *the* ‘a man’, the quintessential entity that is just an indefinite man without being anybody in particular.” (p. 173)

This is puzzling; if the value assigned to ‘a man’ is not an object, what could it be?

## 2.2 *Three puzzles caused by the assimilation of definite descriptions to names*

Different, but equally pressing, problems arise from assimilating definite descriptions to names. (Russell discusses these and other problems in his article, ‘On Denoting.’)

### 2.2.1 *The problem of negative existentials*

Russell asks us to consider sentences like:

The round square is unreal.

The round square is nonexistent.

These sentences are called ‘negative existentials’ because they can be understood as the negation of an existence claim.

If it were the case that definite descriptions were to be understood as a kind of name, then we could give an account of these sentences using the elementary theory of reference sketched above: that is, the sentences would be true just in case there was some object referred to by ‘the round square’ which was, respectively, among the unreal things or the nonexistent things.

Russell does not think that this is plausible; there is, after all, no object — the round square — which could be the referent of the ‘the round square.’ He says:

“It is argued ... that we can speak about ‘the golden mountain,’ ‘the round square,’ and so on; we can make true propositions of which these are the subjects; hence they must have some kind of logical being, since otherwise the propositions in which they occur would be meaningless. In such theories, it seems to me, there is a failure of that feeling for reality which ought to be preserved in even the most abstract studies. Logic, I should maintain, must no more admit a unicorn than zoology can; for logic is concerned with the real world just as truly as zoology, though with its more abstract and general features. To say that unicorns have an existence in heraldry, or in literature, or in imagination, is a most pitiful and paltry evasion. What exists in heraldry is not an animal, made of flesh and blood, moving and breathing of its own initiative. What exists is a picture, or description in words.”

Russell’s point here is that there are no nonexistent things; there are no round squares, and there is no golden mountain. What we need is an account of how definite descriptions work which can explain the truth of some negative existentials without the ‘pitiful and paltry evasion’ of claiming that such things do exist, or at least are around to serve as the referents of definite descriptions.

### 2.2.2 *Substitution failures*

There is another problem with assimilating definite descriptions to names, which Russell only touches on in this article. Russell writes:

“A proposition containing a description is not identical with what that proposition becomes when a name is substituted, even if that name names the same object as the description describes. ‘Scott is the author of *Waverly*’ is obviously a different proposition from ‘Scott is Scott’: the first is a fact in literary history, the second a trivial truism.” (p. 174)

What does Russell mean by ‘proposition’ here?

How Russell’s argument can be strengthened, by embedding his two example sentences in the report of someone’s thoughts or beliefs.

### 2.2.3 *The law of the excluded middle*

Russell discusses a third puzzle in his 1905 article, ‘On Denoting’:

“By the law of the excluded middle, either ‘*A* is *B*’ or ‘*A* is not *B*’ must be true. Hence either ‘The present King of France is bald’ or ‘The present King of France is not bald’ must be true. Yet if we enumerated the things that are bald, and then the things that are not bald, we should not find the present King of France in either list. Hegelians, who love a synthesis, will probably conclude that he wears a wig.”

### 2.3 *The distinction between primary and secondary occurrence*

The intuitive puzzle: it seems that some sentences are ambiguous despite the fact that they contain no ambiguous terms.

There is another difference between names and descriptions which Russell notes only in passing toward the end of the article, but which can also be used as an argument that descriptions function quite differently than names. Consider the following three sentences:

The King of France is not bald.  
That person [said while pointing] is not bald.  
John is not bald.

As Russell points out, the first of these sentences is ambiguous in a way that the second two are not. This, again, seems to show that definite descriptions (and indefinite

ones) function somehow differently than names and phrases like ‘that person.’ We need a theory of descriptions which can explain the fact that the first sentence has two interpretations.

### 3 Russell’s theory of descriptions

Russell thinks that the key to giving an adequate analysis of descriptions is the distinction between propositions and propositional functions.

#### 3.1 *Indefinite descriptions*

Russell gives his analysis of indefinite descriptions on p. 171:

“The definition is as follows:

The statement that ‘an object having the property  $\phi$  has the property  $\psi$ ’

means

“The joint assertion of  $\phi x$  and  $\psi x$  is not always false.”

How this relates to propositional functions; how it relates to normal existential quantification. A tension in the view.

#### 3.2 *Definite descriptions*

Later in the article, Russell gives his analysis of sentences containing definite descriptions:

“We are now in a position to define propositions in which a definite description occurs. The only thing that distinguishes ‘the so-and-so’ from ‘a s-and-so’ is the implication of uniqueness. We cannot speak of ‘*the* inhabitant of London’, because inhabiting London is an attribute which is not unique.”

Later he gives the following analysis of ‘the author of *Waverly* was Scotch’:

- (1) “*x*” wrote *Waverly*” is not always false;
- (2) “if *x* and *y* wrote *Waverly*, *x* and *y* are identical” is always true;
- (3) “if *x* wrote *Waverly*, *x* was Scotch” is always true. (p. 177)

You can think of Russell as giving three conditions for ‘the  $F$  is  $G$ ’ to be true: there must exist at least one thing which is  $F$ , there must exist at most one thing which is  $F$ , and whatever is  $F$  must be  $G$ .

### 3.3 ‘Everyone’, ‘someone’

We have seen that Russell resists the assimilation of descriptions to the paradigm of names; what maybe less obvious is that he is assimilating descriptions to another paradigm, that of *quantifier phrases*. Consider the following sentences:

Everyone is happy.  
Someone is happy.  
Most people are happy.

What are the logical forms of these sentences? How, i.e., would you construct a theory of reference for them?

### 3.4 Strengths of Russell’s theory

Russell’s theory as an alternative theory of reference: an explanation of what descriptions contribute to determining the truth value of sentences in which they occur.

His solution to the problem that indefinite expressions do not, in one good sense, have a particular object as their referent.

His solution to the problem of negative existentials.

His explanation of why descriptions are not interchangeable with names.

His explanation of the ambiguity in ‘The King of France is not bald.’ Comparison with ‘Everyone is not bald.’

## 4 Objections to Russell’s theory

### 4.1 Incomplete definite descriptions

Consider what Russell’s view says about the truth conditions for:

The book is on the table.

### 4.2 Other uses of ‘the’: generics

How would you apply Russell’s theory to ‘The whale is a mammal.’?

#### 4.3 *The view that sentences containing descriptions say something about propositional functions*

### 5 **Russell's view of names**

Russell gives the following view of names:

“A name is a simple symbol whose meaning is something that can only occur as subject, *i.e.*, something of the kind that ... we defined as an ‘individual’ or a ‘particular.’” (p. 173)

And later:

“*a name* ... is a simple symbol, directly designating an individual which is its meaning, and having this meaning in its own right, independently of the meanings of all other words” (p. 174)

This has been implicit all along in the contrast between names and descriptions.

Genuine names vs. disguised descriptions; why some names must be regarded as disguised descriptions. Russell's claim that “We may inquire significantly whether Homer existed, which we could not do if ‘Homer’ were a name” (p. 178).

The characteristics of genuine, or ‘logically proper’ names.

### 6 **The metaphysical importance of Russell's theory**

Russell's theory as a way of eliminating entities from one's metaphysics.

Importance for epistemology: Russell's claim that “It is possible to have much knowledge concerning a term described, *i.e.* to know many propositions concerning ‘the so-and-so’, without actually knowing what the so-and-so is ...” (p. 178). The distinction between ‘knowledge by acquaintance and knowledge by description.’

Application of these ideas to the case of our knowledge about material objects.